

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electronic musical performance instrument comprising:

a first modular control module comprising:

a first musical instrument input interface manipulatable by a human operator integral with; and

a first control engine electronic circuitry being connected to the first musical instrument input interface, the first control engine electronic circuitry receives human operator input representations when the first musical instrument input interface is manipulated, the first control engine electronic circuitry provides an output that comprises a first manipulation representation in an electronic format for monitoring the input keys for input by the human operator;

a second modular control module comprising:

a second musical instrument input interface manipulatable by a human operator;

and

a second control engine electronic circuitry being connected to the second musical instrument input interface, the second control engine electronic circuitry receives human operator input representations when the second musical instrument input interface is manipulated, the second control engine electronic circuitry provides an output that comprises a second manipulation representation in the electronic format; the first control engine electronic circuitry and the second control engine electronic circuitry being interchangeable; and

a motherboard integral with a central processing unit adapted to run running a general purpose computer operating system, the general purpose computer operating system being configured to enable the motherboard to run at least one user selected capable of running alternative sound synthesis software packages to generate sound signals from using the first manipulation representation and the second manipulation representation, the input from the human operator's manipulation input to the musical instrument interface.

Claims 2 - 16 (Canceled)

AMENDMENT AFTER FINAL

SN: 10/758,177

Atty. Dkt. No. OPEN-29,267

17. (New) The electronic musical performance instrument of claim 1, wherein the first modular control module is removably connected to the motherboard and exchangeable with a third modular control module.

18. (New) The electronic musical performance instrument of claim 1, wherein the first modular control module is removably attached to the electronic musical performance instrument and exchangeable with a third modular control module.

19. (New) The electronic musical performance instrument of claim 1, wherein the electronic format is MIDI.

20. (New) The electronic musical performance instrument of claim 1, wherein the electronic format is USB.

21. (New) The electronic musical performance instrument of claim 1, wherein the first control engine electronic circuitry further comprises:

a data bus that connects the first control engine electronic circuitry to the first musical instrument input interface;

5 a CPU connected to the data bus;

a programmable logic device (PLD) connected to the data bus; and

a programmable system on chip (PSOC) processor connected to the data bus.

22. (New) The electronic musical performance instrument of claim 21, wherein the CPU, the PLD and the PSOC processor operate together to convert the human operator input representations from the first musical instrument input interface into the electronic format.

23. (New) The electronic musical performance instrument of claim 21, wherein the first control engine electronic circuitry further comprises a USB circuit connected to the data bus, the USB circuit comprises a USB connection for the motherboard.

24. (New) The electronic musical performance instrument of claim 1, wherein the first musical instrument input interface comprises:

at least one human interface device; and

a non-volatile memory device containing a configuration key, the configuration key

5 containing a configuration information for use by the first control engine electronic circuitry so as to operate in conjunction with the first musical instrument input interface.

25. (New) An electronic sound performance instrument comprising:

a motherboard adapted to run a computer operating system, the computer operating system being configured to enable the motherboard to run at least one user selected sound software package to generate sound signals;

5 a plurality of control module slots;

a first modular control module adapted to be removably positionable in any of the plurality of control module slots, the first modular control module comprising:

a first control surface circuit comprising an instrument input interface, which produces a first manipulation signal in response to human operator manipulation of a first control input; and

10 a first control engine circuit electrically connected to the first control surface circuit, the first control engine circuit receives the first manipulation signal and produces a first modular control module output, the first modular control module output being provided to the motherboard; and

15 a second modular control module adapted to be removably positionable in any of the plurality of control module slots, the second modular control module comprising:

a second control surface circuit comprising an instrument input interface, which produces a second manipulation signal in response to human operator manipulation of a second control input; and

20 a second control engine circuit being interchangeable with the first control engine circuit, the second control engine circuit electrically connected to the second control surface circuit, the second control engine circuit receives the second manipulation signal and produces a second modular control module output, the second modular control module output being provided to the motherboard; the at least one user selected sound

- 25 software package uses the first modular control module output and the second modular control module output to generate the sound signals.
26. (New) The electronic sound performance instrument of claim 25, wherein the first control engine circuit and the second control engine circuit are substantially identical.
27. (New) The electronic sound performance instrument of claim 25, wherein the first control engine circuit further comprises:
- a data bus;
 - a CPU connected to the data bus;
 - 5 a programmable logic device (PLD) connected to the data bus; and
 - a programmable system on chip (PSOC) processor connected to the data bus.
28. (New) The electronic sound performance instrument of claim 27, wherein the first control engine circuit is electrically connected to the first control surface circuit by the data bus.
29. (New) The electronic sound performance instrument of claim 27, wherein the CPU, the PLD and the PSOC processor operate together to convert the first manipulation signal into the first modular control module output, the first modular control module output being in a standardized signal format.
30. (New) The electronic sound performance instrument of claim 27, further comprising USB circuitry connected to the data bus, the USB circuitry receives a representation of the first manipulation signal and outputs the representation of the first manipulation signal in a USB format.
31. (New) The electronic sound performance instrument of claim 25, wherein the first modular control module output comprises MIDI format.
32. (New) The electronic sound performance instrument of claim 25, wherein the first modular control module output further comprises USB format.

33. (New) The electronic sound performance instrument of claim 25, wherein the first manipulation signal comprises MIDI format.